









Aquadopp Profiler 600 kHz found or type unknown

Up to 40 m current profiling range; easy to operate and deploy

The Aquadopp Profiler is a highly versatile Acoustic Doppler Current Profiler (ADCP) available in four profiling range options, from < 1 m to > 85 m. Designed for simple yet powerful operation, this current profiler is packed with features used by engineers and researchers to enable accurate and effective hydrodynamic data collection in a variety of environmental conditions.

Applications

Highlights

-  Up to 40 m current profiling range
-  Ideal for mean current measurements
-  Easy to operate and deploy
-  Mean flow measurements with high focus on ease of use and simplicity
-  Measurements in flow regimes with strong variations in flow speeds
-  Studies of tidal currents
-  Measurements of combinations of waves and currents
-  Suitable for wave buoys

Technical specifications

Water velocity measurements

Maximum profiling range	30-40 m
Cell size	1-4 m
Minimum blanking	0.50 m
Maximum number of cells	96
Measurement cell position	N/A
Default position (along beam)	N/A
Velocity range	±10 m/s
Accuracy	±1% of measured value ±0.5 cm/s
Velocity precision	Consult instrument software
Maximum sampling rate (output)	1 Hz
Internal sampling rate	4 Hz

Echo intensity (along slanted beams)

Sampling	Same as velocity
Resolution	0.45 dB
Dynamic range	90 dB
Transducer acoustic frequency	600 kHz

[arrow]

Echo intensity (along slantedbeams)

Number of beams	3
Beam width [arrow]	3.0°

HR option

Maximum profiling range	N/A
Cell size	N/A
Minimum blanking	N/A
Maximum number of cells	N/A
Range/Velocity limitations	N/A
Accuracy	N/A
Max. sampling rate [arrow]	N/A

Z-Cell option

Cell zero acoustic frequency	N/A
Maximum profiling range	N/A
Number of beams [arrow]	N/A

Sensors

Temperature:	Thermistor embedded in head
Temp. range	-4 to +40 °C
Temp. accuracy/resolution	0.1 °C/0.01 °C
Temp. time response	10 min
Compass:	Magnetometer
Accuracy/resolution	2°/0.1° for tilt < 20°
Tilt:	Liquid level
Accuracy/resolution	0.2°/0.1°
Maximum tilt	30°
Up or Down	Automatic detect
Pressure:	Piezoresistive
Range	0-100 m (inquire for options)
Accuracy/precision [arrow]	0.5% FS / 0.005% of full scale

Analog inputs

No. of channels	2
Supply voltage to analog output devices	Three options selectable through firmware commands:1) Battery voltage/500 mA, 2) +5 V/250 mA, 3) +12 V/100 mA
Voltage input	0-5 V

[arrow]

Analog inputs

Resolution
[arrow] 16-bit A/D

Data recording

Capacity 9 MB, can add 4/16 GB
Data record 9*Ncells + 32 bytes
Diagnostics record N/A
Wave record Nsamples * 24 + 60 bytes
Mode
[arrow] Stop when full (default) or wrap mode

Real-time clock

Accuracy ±1 min/year
Backup in absence of power 4 weeks
[arrow]

Data communications

I/O RS-232 or RS-422
Communication baud rate 300-115200 Bd
Recorder download baud rate 600/1200 kBd for both RS-232 and RS-422
User control Handled via "Aquadopp" software, ActiveX®function calls, or direct commands with binary or ASCII data output
[arrow]

Connectors

Bulkhead MCBH-8-FS
Cable
[arrow] PMCIL-8-MP on 10m polyurethane cable

Software

Functions Deployment planning, instrument configuration, data retrieval and conversion (for Windows®)

[arrow]

Power

DC input 9-15 V DC
Maximum peak current 3 A
Avg. power consumption 0.06 W
Sleep current < 100 μ A
Transmit power 0.3-20 W, 3 adjustable levels
[arrow]

Batteries

Battery capacity 1) 50 Wh (alkaline or Li-ion), 2) 165 Wh (lithium), 3) Single or dual
New battery voltage 13.5 V DC (alkaline)
[arrow]

Environmental

Operating temperature -5 to +40 °C
Storage temperature -20 to +60 °C
Shock and vibration IEC 721-3-6
EMC approval IEC 61000
Depth rating 300 m
[arrow]

Materials

Standard model POM and polyurethane plastics with titanium fasteners
[arrow]

Dimensions

Maximum diameter 100 mm
Maximum length ~550 mm (single battery), +110 mm (double battery) depending on head configuration
[arrow]

Weight

Weight in air 2.9 kg
Weight in water 0.4 kg
[arrow]

Options

1) Alkaline, lithium or Li-ion external batteries, 2) Inquire for different head configurations